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ABSTRACT

This study was concerned with identifying the specific information needs and personal needs of handicapped students and comparing the selected needs with needs of general students. The study hypothesis was that there is no significant difference between identified needs of handicapped students and those of general students. The significance between the two groups was analyzed using the chi-square statistical technique. The results of the study indicated that handicapped students had significantly greater information needs in the areas of federal loans, aptitude testing, scholarships, solical security benefits, jobs, medi-cal benefits, course prerequisites, work experience, elective courses, and welfare benefits. The personal needs of the handicapped were significantly higher in problems with taking tests, reading skills, study skills, economic resources, writing skills, low grades, personal goals, and sexual adjustment. The general student population had greater information needs as to information on college majors, other colleges, graduation requirements, and their personal needs were higher in problems with smoking, husband/wife relationships, temper control, religious values, suicidal feelings, drug abuse, and venereal disease. (Author/DB)

A COMPARATIVE NEEDS ANALYSIS OF SUPPORTIVE SERVICES FOR NON-HANDICAPPED AND HANDICAPPED PERSONS SEEKING POST-SECONDARY EDUCATION FROM THE COMMUNITY COLLEGE SYSTEM

by

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FRESNO CITY COLLEGE

A PRACTICUM PRESENTED TO NOVA UNIVERSITY
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I. STATEMENT OF THE PROBLEM

Recent studies provide evidence that only a small percentage of the handicapped population of post secondary age are attending community colleges or other institutions of higher education.

Fresno City College in the past year has experienced a dynamic increase in the enrollment of handicapped persons seeking vocational rehabilitation and educational enrichment.

Studies reported by the State Department of Rehabilitation and the local Fresno Unified School District Guidance Department, indicate that there is a growing concern for the development and accountability of programs to meet the needs of a variety of physically, neurologically and/or emotionally handicapped people. In addition, recent legislation in California has shown an increasing awareness of the disparity of Special Education Programs and services between the K-12 grade institutions and the post secondary institutions. The Legislature has also provided the means to establish such programs within the community college through the enactment of funding provisions within the Education Code.

Yet several major factors place constraints upon the community colleges to respond to increasing pressures. These factors are:

1. There has been no comprehensive student needs assessment to identify needs of the handicapped student population that attends the community college, in particular Fresno City College.
2. There has been no specific needs assessment to identify the actual needs of the consumer of the educational services at Fresno City College.

As the result of the above, the development and implementation of Handicapped Student Programs at the Community College is subject of speculation rather than a response to empirical needs of the handicapped student.

The product, process and evaluation phases of any program cannot be clearly defined until a comprehensive needs assessment is completed.

The results of this practicum provides impetus for further change within the educational structure of the State Center Community College District in terms of objectives for program development and managerial control. Based on the statistical analysis of the practicum survey instrument for needs assessment, a prioritizing of these needs will be developed which will enable the District to use them in establishing solution strategies.

II. HYPOTHESIS

Null Hypothesis

There is no significant difference, at the .05 level, between the needs identified by handicapped students of post secondary age and non-handicapped students within the State Center Community College District.

Needs, as used in this context, are identified under "Definition of Terms."

III. BACKGROUND AND SIGNIFICANCE OF THE STUDY

A search of the literature for research on the needs of post-secondary age persons with physical disabilities appear to be futile. It appears that since such recent attention has been afforded this segment of the community college population, the authors of this practicum have elected to include in a report of the literature the following areas of information.

A. A general section relative to the current status of the problems as reported by the California Community College Chancellor's Office;

B. Studies on the basis of attitudes toward the Disabled;

C. Studies relative to the Community Colleges stance toward minority or other "disadvantaged" students, and;

D. Studies of handicaps and their effects on success motivation.

The justification for surveying these seemingly diverse and apparently unrelated areas stems from the authors' point of view that the handicapped have long been the hidden minority of the community college environment. While most colleges recognize that "a few such students" have been around for some time, they appear to "drop-out," "stop-out" or otherwise "fade away" after a few short semesters.

Further, it is contended that the very nature of the psychological ramifications associated with an "acquired" disability, that is, one happening to an individual after the developmental period, have a marked effect on the learning state, motivational set, and self-concept of the individual.

Therefore, the four main catagories indicated above or literature review provided much input for the design of the project, its questionnaire and the item selection.

A. GENERAL:

During the decade of the 1970's, community colleges will be faced with a set of demands different from those they experienced during the past two decades. The concern with building new facilities and providing ample classroom space is being replaced by concern for greater equality of educational opportunities and curricula tailored to the needs of students with varying aptitudes and ability levels.

In spite of the long standing efforts of the secondary schools and the State Department of Education to provide educational opportunities to students with disabilities, the California Community College system has only very recently began to mobilize its resources to meet similar needs. Prior to 1971, none of the 97 community colleges in California had a recognized service program to meet the special needs of handicapped students attending college campuses.

During the past two years, Educational Professions Development Act, Part F, funds have been used to partially close this conspicuous and significant gap. Intensive in-service training workshops have been conducted for community college persons to identify the needs of the handicapped, and to develop the skills, knowledge and abilities required to provide educational opportunities to the handicapped at the post secondary level. Their effectiveness has been demonstrated by the many innovative means by which handicapped students are being served. Further, they are measurable by the extent to which formal programs offerings have grown. In 1970, two community colleges offered formal programs of services. By June of 1973, 25 such programs existed. By May of 1974, 45 programs were identified.

Unfortunately, these worthwhile and necessary efforts have fallen short. A growing awareness of the worth and potential value of the handicapped population has emerged in higher education and in the labor market. Consequently,

the once overlooked and often neglected population of handicapped persons, truly a disadvantaged minority, is challenging the community college commitment to serve the total community. The 45 programs existing on California Community College campuses, as of May 1974, serve approximately 3,500 of the estimated 55,000 in the physically handicapped population of post secondary school age. (Report - California Community College Chancellor's Office, 1974.)

These "high risk" students come to the community college and face overwhelming odds for success, the least of which are the academic obstacles they must surmount. The economic and often the educational deficits of handicapped persons often relegates them to an inferior status position similar to that found in the ethnic minority population. As such no other student in higher education is subjected to the deliberate professional neglect that is shown to the "disadvantaged" student.

Most important, the plight of the handicapped student in the community college requires a sense of urgency on the part of college personnel. For the first time, high risk students are coming to the college campus in search of the "open door" magic to solve their vocational training needs. They are asking questions about their education, but not getting answers that have a high degree of relevancy.

High risk students who belong to the various physical handicap groupings have unique problems which are not completely academic in nature; therefore, the programs or service packages must be designed to meet some of the special needs of this group.

No great interest has been shown in investigating the effects of physical disabilities upon learning with the exception of sensory defects such as deafness and blindness and cerebral lesions. Each of these conditions imposes obviously severe limitations upon learning and performance primarily because they limit the individual's capacity to receive and process information perceptually.

Structural limitations such as paralysis, amputation, and other kinds of more subtle physiological variations have not been thoughtfully investigated. Perhaps it has been the obviousness of physical barriers to performance that has led most investigators to ignore research with these problems, but in rehabilitation it is the problems of abilities and disabilities that are our paramount concerns.

Conceptual definitions of both learning and skill must be provided in the interest of bringing problems more sharply into focus. Learning, as an indispensable subsystem in the process of behavior regulation and control, has been defined as the acquisition and modification of the means of behavior regulation and control. Hence, all learning is considered to be "instrumental" by definition. It is only possible by virtue of perception, motivation, and emotional arousal and is therefore quite dependent upon other subsystems in the central regulating process. Skill, on the other hand, is a matter of the quality of control. It implies intrinsic, self-regulating and self-controlling mastery, i.e., finely coordinated control of the essential systems for performance, sensory and motor. Conceptually, it does not matter whether the skill in question is athletic performance, machine operation, walking, or speaking.

Just to mention some of the variables discussed under other headings, there is probably not one on the following list which could not be demonstrated to affect learning and performance in addition to actual physical impairment and limitation.

FACTORS INFLUENCING LEARNING AND PERFORMANCE

Emotional Factors +	Perceptual Factors +	Motivational Factors
anxiety and distress	self-perception,	decision-making
level of arousal	cognition	achievement motive
somatic	body-image	level of motivation
preoccupation	self-concept	ability and motivation
sensory isolation	internal sensations	success/failure
social isolation	somatic	success probability
restricted mobility	preoccupations	treatment procedures

situational stress
subjective pain
severity of disability
depression and denial

phantom perceptions
altered or absent sensation
sensory compensation
lateral differences in input
spatial/temporal feedback

therapeutic management
psychological vulnerability
patient-staff interaction

B. ATTITUDES TOWARD THE DISABLED AS A BASIS FOR THE LACK OF "SPECIAL SERVICES" AT THE COMMUNITY COLLEGE LEVEL:

The prejudice approach to the study of attitudes toward the disabled may be expressed as the view that the typical attitudes held by the physically normal toward the disabled is that of a negative prejudgement concerning their personal traits, including what has been called "devaluation" by Wright.[45]

Wright is one of those who would compare the attitudes shown towards the disabled with those shown toward many ethnic and religious minorities, including a stereotype of the group. Among the earlier studies referred to by Wright in support of this position is one in which high school students were asked to assign personality characteristics to photographs of six boys, one of whom was pictured in a wheelchair. For half the subjects, however, the same picture was presented with the wheelchair blocked out of the photograph. The result was that, "When depicted as crippled as compared to able-bodied, the stimulus was judged to be more conscientious, to feel more inferior, to be a better friend, to get better grades, to be more even-tempered, to be a better class president, to be more religious, to like parties less, and to be more unhappy". Other studies reviewed at that time indicated only that the publicly expressed attitudes of people toward the disabled ranged from indifferent to slightly favorable.

Another recent study done along similar lines has provided less conclusive findings. Genskow and Maglione[23] have attempted to relate familiarity with disability and dogmatism with the expressed attitudes of college students

toward the disabled. An interesting variation was introduced in having questionnaires administered to each group once by an "able-bodied" person and once by a person in a wheelchair. Subjects for this study were 111 college students in four classes at two state universities, one of which had an active and extensive handicapped student program and the other none. By the nature of the college programs it was felt that the "familiar" and "unfamiliar" dichotomy was met, although actual contact between the subjects on either campus with the disabled was, of course, uncertain. Dogmatism, which would be characterized by intolerant, authoritarian behavior, was measured by means of Rokeach Dogmatism Scale, and ATDP was administered for attitudes toward disability. Once again it was found that familiarity with the physically disabled leads to a more positive attitude. Differences between familiar and unfamiliar groups on the ATDP were not significant when the scale was administered by an "able-bodied" examiner, but were highly significant when given by an administrator in a wheelchair who was, in fact, not disabled. The overall influence of having an able-bodied or wheelchair-bound examiner upon attitudes was not appreciable. Neither was there found to be any significant correlation between "dogmatism" and attitudes toward the disabled. Although dogmatism and ethnocentrism would appear to be related traits, the two do not seem to bear the same relationship to attitudes toward the physically disabled as measured by the ATDP. One must apparently be intolerant and rigid specifically regarding "out groups" before this can be related to attitudes toward the disabled. Those relationships are still by no means clear, although pointing to the conclusion that familiarity with disability and ethnocentrism are important determinants of the attitudes with which we are concerned.

A more recent report by Whiteman and Lukoff[44] has implicated more subtle variations in attitude. Using social work students as subjects, it was found that blindness was evaluated as being more serious and anxiety provoking than

other physical handicaps. Furthermore, there was a rather clear distinction in attitudes toward "blindness" and toward "blind persons," the condition of blindness being evaluated much more negatively than blind persons. Finally, this report points out that the subject's evaluation of blindness was far more severe than that of physical handicap in general, but there was no apparent difference in evaluations of blind and physically handicapped persons.

Certain points appear to be emerging, even at this early stage, in which our knowledge of attitudes toward the disabled is still rather primitive. First of all, there does not appear to be a universal stereotype of the "physically disabled person," and they are not all seen to be alike. Furthermore, based primarily on the work of Lukoff and Whiteman[44] and Whiteman and Lukoff negative attitudes and evaluations may be more related to the condition of disability per se. As Wright[45] points out, however, there is good reason to believe that a negative evaluation of the condition of disability spreads to affect the evaluation of other non-impaired characteristics of the person possessing the disability. Finally, although familiarity and ethnocentrism seem to be rather strongly related to the attitudes held toward the disabled, there is little uniformity among groups of persons except that they prefer to avoid making extreme judgements. Since much of the research in this area is done with college students, whose attitudes are quite likely to be in many instances radically different from those of the general population, generalization of the conclusions concerning attitudes cannot legitimately be carried very far at this time.

The variable of age has not been rigorously investigated in its relation to attitudes toward the disabled, but studies using college students and high school students usually have found a less accepting attitude among adolescents. Siller[39] has reported samples of college, high school, and junior high students finding that college students were consistently more accepting in their attitude

toward the disabled than were high school and junior high students who were quite similar. Horowitz, Rees and Horowitz[27] have explored the attitudes and information about deafness among sixth grade, high school, college, and graduate students and a sample of PTA members. They reported that as a general trend a continuum exists with respect to age, education and maturity, and realistic attitudes and information relative to the personal and achievement characteristics of the deaf. There was no significant difference, however, among these five groups concerning their attitudes toward and ideas about the treatment or training of the deaf.

The thought is often expressed, too, that there are social class differences in attitudes toward physical disability. Lukoff and Whiteman's[44] samples of lower and middle income households were not interpreted to have essentially different attitudes from any of their other samples. Other research of the relationship between social class and attitudes toward disability has been recently reported by Dow[16] . It was hypothesized that due to a relative emphasis attached to physique, varying inversely with social class, reactions to physical disability would be more severe at lower socioeconomic levels. No difference was found, however, between a sample of middle and lower class families.

Barker, et.al.[2], have stated that during physical trauma, the persons world undergoes a great reduction in scope; the psychological world becomes egocentric. Former determinants of behavior lose their potency, and influences are restricted to only a few persons and needs.

The literature illustrates quite well that any sudden change, whether positive or negative, physical or situational, introduces uncertainty and, as a result, increased emotional arousal. Response to change is conditioned by the nature and extent of the change and the number and kinds of concepts which require modification in order to adapt to the change. Excessive emotional

arousal makes efficient adaptation difficult, although some degree of arousal is necessary to "drive" the person towards adaptation.

C. IMPACT OF DISADVANTAGED STUDENTS IN THE COMMUNITY COLLEGE:

Because of the diversity of disabilities represented among the so-called disadvantaged population, both in type and severity of the medical related diagnosis of the disability, a very wide based non-medical list of accompanying problems are associated with the general discussion of handicapped persons. The Department of Rehabilitation, Social Welfare, Vocational Education Act legislation, conference reports, etc., have at one time or another used some of all of the following statements to describe these problems.

The Handicapped Person:

1. May fail to possess feelings of personal adequacy, self worth, and personal dignity; may have failed so often in school that he is provided with a feeling of hopelessness. May also be unable to accept the disability which has been reinforced by society's negative stereotyping.
2. May frequently be a disabled learner limited in his capacity to master basic communication and computational-quantitative skills.
3. May have limited mobility within his community and thus have little knowledge of not only the mechanics of getting about, of how to use public transportation, but will lack important information regarding the community's geography, institutions, and places of commerce and industry. As a result, he may not view himself as a part of his community.
4. May possess personal-social characteristics which interfere with his ability to function satisfactorily in a competitive work setting.

5. May be affected by chronic illnesses and by sensory-motor defects which reduce his effective response to training and placement.
6. May possess physical characteristics which can elicit rejection and can be viewed by peers, teachers and employers as unpleasant.
7. May lack goal orientation and particularly that which relates to selection of an occupational training area and the anticipation of fulfillment in that area.
8. May have unrealistic notions as to what occupational area would be most appropriate.
9. May lack exposure to worker models. This is particularly true of the large number of handicapped youth whose families receive public assistance or who are plagued by chronic unemployment.

As can be seen from these statements, the student or potential student with a physical disability is faced with need for some recog ition of special needs from the higher education community if meaningful vocational pursuits are to be achieved.

The two year community college is experiencing continued upward spiraling growth patterns. A distinguishing feature of this college has been its open-door admissions policy. It is no exaggeration that this policy implies both a new philosophy and a new challenge for post high school education, and it defies the current selection criteria for college students. The desire for some college training has become one of the passions of the population and has resulted in an increased enrollment of a diversified student body. This variant group is made up of thousands of able students. The most significant change in the enrollment pattern, however, has been the unparalleled increase in the entry of marginal students in the group who are able to take advantage of the open-door character of the two-year school. The community college faces a dilemma: It is confronted with maintaining standards to insure the employ-

ability of its graduates and the unequivocal guarantee of its credits to other accredited colleges and universities. At the same time, it is committed by philosophy to providing some formal education or training for all students regardless of social class, sex, race, and lack of previous academic success. In either case, the comprehensive community college has no option. It has to perform both functions.

Too often the term open-door is hypocritical rhetoric. It is a catch phrase which implies every student can enroll in the college. Open-door means more than the idea that every student with a high school diploma can go to college. It also means that the student, regardless of his level of achievement, will receive the best education possible in the college commensurate with his needs, efforts, motivation, and abilities. In reality, however, most community colleges develop the traditional programs and curricula which prepare able students to transfer to the senior institution, or terminal students to go directly into employment.

While there is a growing interest in experimental compensatory education programs, few have been carefully evaluated to determine whether they offer a meaningful alternative to current programs. Little provision is being made for differentiating between the verbally skilled and the non-verbally-oriented student, between the career-oriented and the undecided student, or between the part-time student with extensive work experience and the student with little or no experience at all, or the student with physical disabilities and the so-called "normal", non-disabled student.

Community junior colleges, unlike their four-year counterparts, strive to accommodate all applicants, whether overachievers or underachievers. A fair number of these students lack confidence in themselves and the necessary learning skills to cope with college. Many have unrealistic aspirations, making them candidates for special counseling. Compensatory programs attempt to

satisfy aspirations by moving beyond the conventional statement that low achievers do not have the ability to measure up. Such efforts start with the assumption that all (or most) students have the ability to achieve under the right circumstances. The congenitally handicapped, for example, who failed to develop adequate reading and communications skills in high school and who carries with him the scars from his earlier encounters reacts in quite a different manner to the competitive environment of the college classroom than do students with well-developed verbal skills.

A recently completed study at Miami-Dade Junior College reported that first-time college students who scored below the twenty-first percentile on the verbal section of the SCAT test were also in need of some form of intensive psychological counseling. Most suffered from lack of confidence, shyness, and an inability to work with authority figures. The report observed that the emotional problems of the low achiever were as significant as his poorly developed learning skills. Coping with such problems requires a system which reinforces in a positive way the student's sense of self-worth and at the same time provides him with an opportunity to develop his intellectual abilities. How to design and install developmental programs that handle such diverse needs requires a body of well-tested procedures.

There is an impressive and unmistakable disparity between the aspirations and the abilities of marginal students. Among such students it is common to find those who indicate that they are interested in certain professions and careers but who have demonstrated neither the aptitude, interest, means of financing (in the case of poor students), nor the persistence required to accomplish their goals. This is not a homogeneous group by any means. The members of the group have come from suburban and inner city schools, rural and urban schools, integrated and segregated schools, and private (including religious) and public schools. Students from these diversified

educational backgrounds do come to the community college with aspirations (that in many cases have been indoctrinated by their parents) which are not commensurate with their past performances. They are pressured by their parents, friends, and others to select programs in which they have no interest as opposed to a career or vocational program that the student might enjoy. This is because the former programs are thought to be more economically or socially respectable.

The predicament of the high risk student is complicated by a growing technology, one that displaces human labor.

The open-door college purports to provide a quality education for the marginal student. Why does it apparently fail to fulfill this obligation? There is a sameness about the answers college people give: There is too little research on the slow learner at the college level, there are no models to observe, too few experts in the area, low priority, little commitment on the part of faculty and administration, and no tradition. One dean of a community college in an eastern state sums it up, "We need precedent; we don't have anything to go on." Neither did Adam and Eve.[9]

The community college faces a dilemma. The dilemma is trying to provide a quality education for both the academically able student and the high risk student. For the able student, the college does a creditable job. The faculty understands him and is happy to be associated with him because he is thought to be "college material." The school's reputation is secure with the qualified student. His accomplishments establish and maintain a good image for the college and reinforce its stature. On the other hand, the community college has not learned how to deal with, and it cannot count on, the abilities of the marginal student. It has not developed the know-how or the real commitment for dealing with him. His academic prowess does not have a history of reflecting on the college in a positive way--if at all. The fact that this student was

accepted by the community college in the first place is considered by some persons as an inherent weakness in the college.

There is still another component of the dilemma: the sense of frustration of the faculty who will be responsible for devising programs for the low-achieving or nonachieving student. Teachers no longer attempt to conceal their lack of knowledge and understanding of the marginal student in college or their lack of training which would help ameliorate his learning problems. Teaching a high risk student is a highly skilled, intellectually demanding task, requiring instructors with unique skills. Teachers who have these skills learned them. They tend to be open-minded, genuine, patient, and want to learn. They do not construe working with the educationally disadvantaged student as an illegitimate extension of their proper function. There are other faculty who feel differently. This latter group of teachers feel that their proper function and that of the college is maintaining standards. Almost no one disputes the legitimacy of the faculty's concern for educational achievement. Yet it is equally legitimate to be concerned about educational failures. To reconcile these two justifiable anxieties is an evident source of conflict.[13]

One way to resolve a part of this conflict is to give the marginal student more attention because this student can make a contribution in excess of what he is calculated to be able to make. Already he secures employment and performs the job efficiently beyond his level of ability as indicated by tests administered by the college.

We are constantly told that virtually no research has been done to assist the educationally disadvantaged in learning at the college level. We are also told that no materials are available to teach the marginal student.

As we have seen, the absence of a clearly defined identity, the challenge of numbers, sparse research, and the conflict of faculty are all components of the dilemma and, as such, must give junior college educators cause for concern

and an intimate sense of conflict. If the problem of devising a program for the educationally disadvantaged is ever resolved--and of course, it must be--a great deal more will have to be known about the student who is to be taught, the teacher, the curriculum, the educational setting, and the rest of what have been called the pivotal problems of education.

D. MOTIVATION AND SUCCESSFUL ACHIEVEMENT OF GOALS:

One of the most important determinants of a person's motivation to perform a task has frequently been shown to be his own subjective estimates of the chances of success or of a favorable outcome of his efforts. The formulations of Atkinson and Feather[1] and others in relation to motivation and decision-making seem especially helpful in considering many types of objectives encountered in vocational and physical rehabilitation. The choices which our students make, whether obvious to us or covert, and the effort they put forth in attempting to attain their objectives are always of vital and immediate concern, for we believe this motivation in turn to determine the results of rehabilitation programs. We may thus consider the students choice of a vocational training goal, or an employment opportunity as essentially following the same rules. The research and theoretical work in achievement motivation, risk-taking and decision-making have adequately demonstrated that we may view student motivation somewhat more clearly within this sort of framework.[1,4,5,14]

This model seems at this point most likely. Motivation to pursue an objective and the degree of effort put forth could be represented as being a function of three factors--costs, the probability of a favorable outcome and utility. All three factors are subjective estimates made by persons in regard to a specific activity or objective and probably are independent of actual objective values which they may take.

$$\text{MOTIVATION} = \frac{P(O_S) \times U}{C}$$

Costs represent an estimate of the expense of attempting an activity and may be considered in terms of time, money, physical or mental effort the endurance of pain or other discomfort, or any other expenditure necessary to performance of a task. The second factor, subjective estimate of the probability of a successful outcome, is simply the individual's own personal estimate of his chances of achieving a favorable result of his efforts. Utility represents the meaning or value which the client places upon the performance of the task and attainment of the objective. We may conceptualize, then student motivation in education as a function of his own estimates of his chances of success times the values he places on attainment of the objective, balanced by his assessment of the costs involved.[1]

Before proceeding to some specific research findings it is necessary to clarify one minor point, the distinction between subjective probability of success, a relatively new concept in relation to motivation, and an older psychological concept of "level of aspiration." Level of aspiration has been a favorite means in psychology of quantifying motivation, but suffered from some fundamental inadequacies. Diggory and Morlock[14] have pointed out that early level of aspiration studies did not deal with the situation in which the immediate goal was to produce within a definite time limit some level of performance which the subject could not readily manipulate. These investigators state, "Level of aspiration may be a valid index of S's feelings of success or failure in a situation where he is free to change his goal from one trial to the next; but if the goal he is trying to achieve is established and maintained by agencies over which he has no control, his estimate of the probability of success is the preferred criterion of his feelings of success or failure." It has concretely been suggested that level of aspiration refers

to "What S hopes he can do" and the probability of success to "What S thinks he actually can do."

The expectation of success or failure, the student's subjective estimate of his chances of success, appears to be an entirely different matter, and in this connection the student will have little or no objective basis for judging the adequacy of how he will perform. We should expect to find, on the basis of some results by Dittory,[14] and others, that students who expect to succeed in rehabilitation programs will put forth more effort and attain greater improvement in treatment than those who expect to fail.

The results of this investigation have shown that students' improvement or progress is significantly related to their subjective estimates of the likelihood of outcomes associated with rehabilitation. Furthermore, age and sex differences in probability estimates were found even though neither factor was significantly related to student progress.

Fundamentally, the factors at work are: human beings consistently make choices based on the utilities of the outcomes and their subjective probabilities of success in attaining the outcomes; they tend to choose courses of action which will optimize gains and minimize losses based on their appraisal of the situation.

The Zane and Lowenthal Studies[46] reached one guiding conclusion "motivation was poor or became poor in all of the cases presented when the student performed worse or anticipated doing worse than he expected of himself. Motivation improved when therapeutic conditions were introduced which permitted the student to achieve his goal". In other words, the authors' clinical impression is that the experience or anticipation of failure in the tasks prescribed in the student's rehabilitation program account for behavior which may be described as "poorly motivated."

Actually, the conception of motivation for rehabilitation expressed by Zane and Lowenthal is more complete than this. In summary, they have stated:

> Motivation is seen as a complex of forces--some interfering with and some disposing towards effort and learning. Thus, negative and positive motivational factors exist. Negative motivational factors arise in states of increasing stress while positive motivational forces develop with decreasing stress. Clinically, increasing stress develops as the patient is unable or anticipates being unable to achieve what he is trying to do. Decreasing stress ensues as the patient becomes able or anticipates being able to achieve his goal.[46]

We are now the conviction that motivation is in reality tied in with the patient or client's level of emotional arousal which, when too high, interferes with performance and in turn changes the directions that subsequent behavior may take. A more recent paper by Zane[47] clarifies his position more fully.

The author has outlined what he believes to be the nature of the process of motivation to achieve some therapeutic objective and the most favorable therapeutic conditions for effective performance. Zane believes that it is far more productive to manipulate and change therapeutic conditions than to attempt to modify the patient's "motivation" or characteristic reactions to stress. He further assumes that any patient can learn under appropriate conditions, although at different rates and by various routes to the goals.

Analyzing patients' efforts as they fail, no matter for what reason, Zane finds that they are simultaneously mobilizing compensatory actions designed to deal with the task, the therapist, and their own subjective emotions. Poor performance, if allowed to stand by the therapist, sets up competing responses of avoidance and increased emotional arousal due to increased stress which can only result in further ineffective learning and performance. Zane interprets, "Effective learning, which requires highly discriminating opera-

tions, becomes impossible as the patient's attention becomes increasingly and irresistibly drawn away from the task to his state of rapid and uncontrollable disorganization of mental and physical capacities, dread and panic."

The secret of the problem of motivation to achieve a difficult objective through rehabilitation programs with such a conception as Zane[47] provides is equally applicable to any technological approach and to any educational objective. It follows that appropriate management creates conditions that allow the patient or student's attention to be maximally focused on a task or goal that is possible for him to achieve. Most rehabilitation counselors, for example, who by virtue of their task of coordinating many separate therapeutic efforts and objectives have a broader perspective than most other therapists concerned with the individual patient, have often been impressed by the ability of failure in one area or even extraneous factors to upset an entire rehabilitation plan.

It is essential that the patient's attention be focused on appropriate goals with the elimination of sources of interference and competing responses. Zane offers three guiding principles of effective management which are worthwhile recounting here. First, he states that the patient's attention can be more easily guided toward therapeutic goals when one begins with effort as the immediate goal, in which case any appropriate action approaches the goal[47] As has already been illustrated in preceding pages, motivation and effort are greatest the nearer the subject comes to attaining or approaching the performance goal. Zane asserts that success in this regard reduces stress, improves the patient's expectations for himself, and provides a greater sense of security in regard to the therapist. Second, Zane's motivational concept emphasizes that, "Selections are made of attainable and compatible goals, based upon experiences with the individual patient, which in sequence lead to achievement of the more distant prescribed goal." In general, it is correctly recommended

that difficult or frustrating therapeutic objectives be divided into more immediately attainable components which are of more recognizable significance to the patient. The third recommendation involves the use of "feedback" to the patient of the results of his efforts, which means the discrete use of criticism and praise so that mistakes can be corrected. The use of feedback principles is important in learning and in maintaining effective performance levels as will be further discussed in the section to follow in the conditions for skilled performance. Clearly, throughout Zane's clinical approach there is paramount importance placed upon the therapeutic relationship itself which of course is controllable by the therapist. Some additional viewpoints of this problem will be of value.

Schlesinger[38] suggests that many "motivational" problems are not due to patient characteristics entirely, but are equally brought about by the nature of the institutions and agencies and the relationships and settings involved in rehabilitation.

Schlesinger[38] has indicated the major characteristics of institutions and agencies serving the physically disabled which in themselves create behavioral obstacles to successful rehabilitation. Sociologically, it has been suggested that the rehabilitation center, for example, provides complete care and assumes total responsibility for all aspects of the patient's life. It is little wonder that entry and termination at such an institution are most stressful experiences for a great many clients., as mentioned previously. In the hierarchy of authority, the patient is on the bottom and finds himself in a most powerless position. Schlesinger interprets that, "The hospital provides little opportunity for mature, autonomous, self-directed responsible behavior. Certainly this complete control over the behavior of the patient is warranted in the phase of recovery from the acute accident, but the question may be raised of its justifiability for longer periods of time." 38

Schlesinger has indicated, too, that patients adopt a variety of methods of dealing with these circumstances.

> With little opportunity for direct control, the patients may respond to the control apparatus in several different ways: (1) The patient may respond with complete apathy and lack of involvement. (2) The patient may be rebellious and refuse to cooperate with the staff. (3) The patient may be a 'colonizer,' taking up 'permanent' residence in the hospital, a more benign atmosphere for him than the harsher world outside. He will accept the authority system as part of the environment he has to put up with. (4) Patients may become 'converts' actively promulgating the party line. These patients take over the official staff picture of themselves and try to act out the role of the perfect inmate. They may even take over the attitudes of the staff toward other patients and urge them to conform to the house rules. This phenomenon has been noted among concentration camp inmates by Bettelheim. Many of the older inmates identified with their captors, wore bits of the guards discarded clothing, and behaved toward the other concentration camp members even more brutually than did the guards. (5) And, finally, the patient may elect to 'play it cool.' This kind of feigned interest in the program allows the person to participate without undergoing any real change.

Schlesinger[38] advocates a gradual increase during treatment in the responsibility and decision-making participation of clients in the rehabilitation program whose primary "obligation" is to learn improved physical, personal, and social skills. If we accept the principle that all rehabilitation fields should be concerned with restoring the maximum degree of self-control to their patients or clients, Schlesinger's recommendation is essential for a desirable outcome and for optimal motivation for educational goals as well.

E. SUMMARY IMPRESSIONS OF LITERATURE REVIEW:

A major impression from the reports and research reviewed is that the concept of motivation, inferior status of the disabled, and attitudes toward the disabled are almost too broad, too complex, and too inclusive to usefully stimulate and aid in the improvement of the educational practice at the community college level. Hopefully, however, a somewhat novel and more systematically meaningful conception of the organization of behavior in relation to physical disability and higher education is opened and that discussions of perceptual processes, inferior or disadvantaged status position, motivation and attitudes are all equally relevant to the problem of behavior organization and changes in organization to meet the covert as well as the overt needs of those with physical disabilities seeking a community college education.

The needs of the handicapped individual can be defined, from three points of view: (1) As understood and expressed by the handicapped person, (2) As evaluated and interpreted by the rehabilitation worker, and (3) As established and imposed by the societal structure. None of the three can justifiably stand alone as a single determinant of the needs of the handicapped individual.

Needs may be categorized and exist generally for all handicapped persons, but for each individual the needs exist in varying degrees and combinations. The pattern of needs for each handicapped individual is not constant; it is dynamically changing. In effect, the needs of a given disabled individual are unique.

Needs of the Handicapped

1. Economic Needs

Every human being needs an adequate income for food, clothing, and shelter; for the maintenance of physical and mental health. The need for economic independence is accentuated in the handicapped individual by his other areas of need, principally vocational.

While the handicapped person is often dependent upon others, it is also frequently true that others are economically dependent upon the handicapped individual. Adequate income during physical restoration, vocational training, and placement becomes an imperative need.

2. Medical Needs

The handicapped individual needs physical or mental restoration. He may require surgery, medication, hospitalization, physical therapy, prosthesis, or specially designed equipment to aid in performing the activities of daily living. The need for improved physical or mental function underlies other needs.

Increase attention is being given psychosomatic conditions and other medical-psychological problems prevalent among disabled people.

3. Psychological Needs

All human beings need to understand themselves. They need self-adjustment, self-confidence, self-development, and self-respect. They need to recognize their capacities as well as their limitations. For the handicapped individual self-understanding is complicated by the problem of the impaired self-image. Too commonly the handicapped person is more conscious of his differences than of his similarities, of his losses than of his abilities. He acquires a sense of misfortune and a feeling of inequality. Acceptance of his disability and its accompanying handicap is a key need.

The emotional security and stability of the handicapped person appear to be more precarious than that of the non-handicapped person, not the handicapped individual is in need of personality development and of adjustment to his emotional problems.

4. Educational Needs

The handicapped individual sometimes lacks education because he has been unable to utilize physical facilities designed for normal children. In other

instances there has been no provision for home teaching or for a hospital school. Frequently the handicapped individual has dropped out of the public school because there was no provision in the curriculum for special education.

Therefore, educational needs vary from rudimentary to professional education, from home teaching to hospital classes, from special education in the public school curriculum to special schools for a particular handicap.

Educational needs may be vocational or avocational. The handicapped individual needs to grow intellectually insofar as his intelligence permits.

There are two approaches to the problem of education of the handicapped: (1) Compensation for lack of education resulting from a disability; and (2) A positive approach developing to the fullest assets of the handicapped person so that he may compete on more equal terms with the non-handicapped.

5. Social Needs

There need to be four levels of acceptance of the handicapped individual: (1) Family acceptance, (2) Community acceptance, (3) Societal acceptance, and (4) Cultural acceptance.

The handicapped individual needs the acceptance of himself as a person by his family. Their understanding of his aptitudes and his restrictions is essential. Their acceptance of his vocational goals and plans is needed for his successful rehabilitation.

He needs to develop skills and habits in personal grooming. He needs to practice self-discipline. He needs to feel productive vocationally and creative artistically. He needs to participate in the community structure as a citizen. The handicapped individual needs community acceptance which is demonstrated by the provision of opportunities to meet his needs by individuals and groups.

The handicapped person needs the acceptance of the society of which he and his community are a part. If the handicapped individual is to feel accepted by the social order, there needs to be tangible evidence of that acceptance.

One of our culture's features is the emphasis on work. Work contributes to status. As long as this characteristic prevails, the handicapped person vitally needs work.

The handicapped person needs preparation for readiness to enter or re-enter the community. He needs help in adjusting to new or changed conditions. He needs an environment in which he can gradually and realistically approach normal participation in community life and the workday world.

He needs work experience in a real work environment that can aid in his physical, mental, emotional, personal, and social, as well as his vocational adjustment.

6. Vocational Needs

Vocational preparation is needed by the handicapped individual before he can assume or resume his place in the community. Frequently the attainment of economic independence is a major aspect of rehabilitation.

For those lacking work experience, there is need for diversified opportunities for a practical try-out of vocational potentials and for an exploration of job types, where suitability of job and physical tolerance can be established.

Vocational training (or retraining if the individual has had previous work experience) is needed by the handicapped person. He needs to acquire saleable skills. Ordinarily the handicapped person needs to develop work associated habits. There is need for more areas of training, for more varied opportunities, in which the handicapped individual might find and perfect his skills, recognize and accept his limitations.

Handicapped persons need assistance in deciding upon realistic vocational objectives in planning for their achievement.

IV. DEFINITION OF TERMS

A. Handicapped Population - Students or potential students in a California Community College who meet the criteria of the following:

> "Handicapped persons" means mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason of their handicapping condition cannot succeed in a vocational or consumer and homemaking education program designed for persons without such handicaps, and who for that reason require special educational assistance or a modified vocational or consumer and homemaking education program.

B. Specific Disabling Conditions:

1. Orthopedically Handicapped - Individuals with a limited ability in self-mobility, sitting and/or using materials or equipment due to muscular, skeletal or neuro-muscular impairment.
2. Partially Sighted - Vision which, after correction, is such that printed materials can be used with magnification or under special conditions.
3. Legally Blind - Visual loss so severe that, for educational purposes, vision cannot be used as a means of learning.
4. Deaf - Unable to hear or recognize speech sounds, even with the use of a hearing aid.

5. Severely Hard of Hearing - Difficulty in hearing and understanding speech. Hearing must be supplemented by a hearing aid and/or lip reading.

6. Speech Impaired - Speech differs from that of others to the extent that it is noticeable, such as articulatory, vocal, stuttering, delayed or speech disorder.

7. Other Health Impaired - Limited strength, vitality and alertness due to chronic health problem.

8. Developmentally Disabled - Includes only individuals who can be trained to enter the world of work, often "labeled" as slow-learner or mentally exceptional.

9. Learning Disability - Exhibited by a difficulty in using one or more basic processes involved in understanding, or in using spoken or written language. Does not include visual, hearing or motor handicaps, environmental disadvantages or other concerns.

10. Emotionally Disturbed - Individuals with difficulties limiting their ability to consistently govern their own behavior.

C. Needs - The requirement for educational programs and/or services.

D. Needs Analysis - A formal controlled process for acquiring data, which when subjected to statistical analysis, will disclose any existing needs.

E. District - The defined geographical area for which a specific community college exists.

F. Information Needs - The following statements represent the specific information needs being tested in this study:

1. Information concerning graduation requirements.
2. Information concerning elective courses.
3. Information concerning prerequisite courses.
4. Information concerning where to get aptitute testing.
5. Specific infomation concerning various jobs in which you are interested.
6. Information concerning college scholarships.
7. Information concerning federal loans to students.
8. Information concerning Social Security benefits.
9. Information concerning Medi-Cal benefits.
10. Information concerning welfare benefits.
11. Information concerning Veterans benefits.
12. Information concerning other colleges.
13. Information concerning college majors.
14. Information concerning work experience courses available at F.C.C.

G. Personal Counseling Needs - The following statements represent the specific personal counseling needs being tested in this study:

1. Drug abuse.
2. Alcoholism.
3. Feelings of anxiety and tension.
4. Economic resources.
5. Religion value conflicts.
6. Husband-wife relationship.

7. Withdrawal tendencies.
8. Temper control or self control problem.
9. Sexual adjustment.
10. Establishing personal goals.
11. Problem with reading skills needed for college work.
12. Problem with writing skills needed to do class work.
13. Problem with taking tests to pass courses.
14. Problem with low (D and F) school grades.
15. Problem with study skills.
16. Suicidal feelings.
17. Problems with V.D.
18. Smoking problem.

V. LIMITATIONS OF THE STUDY

The study is limited to the geographic area served by the State Center Community College District. Further the sample population is limited to the major agencies serving the adult handicapped population in this area; namely, the State Department of Rehabilitation, the Federal Social Security, S.S.I. Section, and the Veterans Administration.

The study is also delimited to the specific needs identified in the definition of terms.

VI. BASIC ASSUMPTIONS

1. The Handicapped Students represented in this study are characteristically similar to the total handicapped student population.

2. The General Students represented in this study are characteristically similar to the total general student population.

VII. PROCEDURES FOR COLLECTING THE DATA

A. General:

1. The practicum team developed a survey instrument that will fulfill the need for data necessary for a valid assessment of the needs of the handicapped population in the State Center Community College District. During these initial meetings the team undertook the following activities:

a. Statement of the purpose

b. Developed a working hypothesis

c. Determination of data needs

d. Developed a plan for data reduction and analysis

e. Designed the survey instrument

f. Developed survey questionnaire items for acquiring necessary data

g. Established survey procedures

2. Pilot Test Survey Instrument

3. Evaluate Pilot Test - An analysis of the data received, data, adequacy and additional data needs, in addition to a critique of the pilot test activity resulted in recommendations for a modification/ revision of the survey instrument.

4. Developed Final Instrument - Based on original development and evaluation input, final survey instrument and procedures where developed by the practicum team.

5. Conduct the District Wide Survey

6. Analysis of Data in Terms of the Null Hypothesis - The practicum team analyzed the Districts survey results and constructed a composite of the results using applied statistical techniques.

B. Survey Procedures - Handicapped Student

1. Agency Participation - This instrument is designed to collect data from handicapped persons, who are clients of the following agencies:

a. The California Department of Public Welfare

b. The California Secondary School System

c. The California Department of Rehabilitation

d. The California Community Colleges

2. Sampling - The practicum team could not survey the entire target population. Therefore, a random sampling technique was utilized. The procedures gave confidence the data collected would yield needs data on the general handicapped population in our district, as served by the four aforementioned agencies.

3. Agency Contact - The agencies were contacted personally to permit an effective review of our purpose and the procedures to follow. It also provides us with an opportunity to establish articulation with vital community agencies.

4. Target Population - We sought needs data from persons with handicaps as defined by the California State Plan for Vocational Education. We have re-written those definitions in an effort to communicate, not offend and yet permit identification. We realize that our definitions, as written, would not effectively lend them-

selves to a legal disability determination. Our definitions can be found in the questionnaire, Section C and in the Definition of Terms section of this report.

Where a person's disability was not apparent (not visible or cannot be sure), the person was queried to determine if a disability exists by our definition. If so, that person was a candidate for survey purposes.

5. Identification - Several identification techniques were built into the survey questionnaire, with specific purposes in mind.

a. Zip Code - Zip codes were used to identify respondents who reside in our district area.

b. Respondents Street Address - We didn't want duplication of data. This item helped sort out any such duplication. (i.e., respondent submits more than one questionnaire.)

c. Name (optional) - We didn't need the person's name. However, if it was given, it will permit college personnel to follow-up with specific individuals when that appears to be a desirable course of action.

d. Agency Code - Each form has an A, B, C, or D on the second page, upper right corner. This permitted data analysis by agency.

6. Random Sampling - We wanted to survey a small sample of the persons with handicaps in our area. That sample would permit an analysis, the results of which are fairly representative of the total group being surveyed.

7. Procedures - This survey was administered to target respondents at the four agencies previously mentioned. Each agency used the forms identified by its code, as follows:

a. Community College - A

b. Secondary - B

c. Welfare - C

d. Rehabilitation - D

A. Welfare and Rehabilitation - Practicum team simply made the forms available at the intake section. As persons presented themselves for public assistance, a practicum team member:

1. Determined if they have a defined disability, and if yes;
2. Determined if their zip code matches a college zip code (or codes), and if yes;
3. Handed out forms for completion based on a random number sequence such as 3, 5, 7, etc.

B. Secondary - Surveyed an integrated population by first alphabetizing all those who had a defined disability. Used a random number to select candidates, worked only with secondary feeder schools to the college.

Where segregated classes were held, sampled all those classes by assigning a proportionate number of forms to each class, and selecting respondents randomly within each class.

C. College - Alphabetized the known population, and in randomly selecting candidates. Then had the forms administered by staff having regular contact with the individual candidates. We also

worked with instructors in classes for the handicapped; the counseling staff helped based upon its contacts; and the college nurse was of great assistance.

C. Survey Procedures - General Student

The practicum team assigned random sampling numbers to each day and evening class offered at Fresno City College. Classes were then selected on a random basis in order to receive 500 responses from the general student population.

The general student only responded to the Information Needs and Personal Counseling Needs areas of the questionnaire.

VIII. PROCEDURES FOR TREATING THE DATA

This study is concerned with testing the significance of the difference between two sample proportions.

Selected Information Needs and Selected Personal Counseling Needs Data received from Handicapped Students and General Students will be treated through the utilization of Chi Square in order to test the following hypotheses:

(HO1) Information Needs Hypothesis

There is no difference between the selected information needs of individuals without physical disabilities (general students) and individuals with physical disabilities (handicapped) of post secondary school age, as expressed at the .05 level of significance.

(HO2) Personal Counseling Needs

The following statistical treatment is employed to determine the variance of each need:

1. Degrees of Freedom

$$df = (r-1)\ (c-1)$$

2. Level of Significance .05 (3.84 df)

3. Chi Square (X^2)

$$X^2 = \frac{(f_o-f_e)^2}{(f_e)} + \frac{(f_o-f_e)^2}{(f_e)} + \frac{(f_o-f_e)^2}{(f_e)} + \frac{(f_o-f_e)^2}{(f_e)}$$

The following statistical treatment is utilized to determine Chi Square:

NEED: _____

1. Degrees of Freedom:

   $df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
   $df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e			
GENERAL STUDENTS	f_o $f_o - f_e$ f_e			
TOTALS	f_o f_e			

4. Chi Square (x^2)

$$x^2 = \_\_\_\_ \frac{(f_o - f_e)^2}{(f_e)} + \_\_\_\_ \frac{(f_o - f_e)^2}{(f_e)} + \_\_\_\_ \frac{(f_o - f_e)^2}{(f_e)} + \_\_\_\_ \frac{(f_o - f_e)^2}{(f_e)}$$

$$x^2 = \_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_$$

$x^2 =$ _____ 3.84

5. Conclusion:

IX. PURE DATA RESULTING FROM THE STUDY

The following pages represent a presentation of "Pure Data Resulting from the Study."

The "Pure Data" is presented in two major hypothesis categories - H_{O1}: Statistical Treatment for Information Needs and H_{O2}: Statistical Treatment for Personal Counseling Needs.

Each need is presented on a Chi Square Table designed by members of the study team.

STATISTICAL TREATMENT

INFORMATION NEEDS

HYPOTHESIS: H_{01}

There is no difference in the specific information needs for college related items of persons without physical disabilities and those persons with physical disabilities of post-secondary school age, as expressed at the .05 level of significance.

NEED: Information concerning graduation requirements

1. Degrees of Freedom:

   $df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
   $df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	101 25.9^2 126.9	93 25.9^2 67.1	194 194.0
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	321 25.9^2 295.1	130 25.9^2 155.9	451 451.0
TOTALS	f_o f_e	422 422.0	223 223.0	645 645.0

4. Chi Square (x^2)

$$x^2 = \frac{670.81}{126.9}\frac{(f_o - f_e)^2}{(f_e)} + \frac{670.81}{67.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{670.81}{295.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{670.81}{155.9}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 5.29 + 10.00 + 2.27 + 4.30

$x^2 =$ 21.86 $>$ 3.84

5. Conclusion: Reject H_{01}; Significant.

NEED: Information concerning elective courses

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	158 18.8^2 139.2	41 18.8^2 59.8	199 199
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	287 18.8^2 305.8	150 18.8^2 131.2	437 437
TOTALS	f_o f_e	445 445.0	191 191.0	636 636.0

4. Chi Square (x^2)

$$x^2 = \frac{353.44}{139.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{353.44}{59.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{353.44}{305.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{353.44}{131.2}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 2.54 + 5.91 + 1.16 + 2.69

$x^2 =$ 12.30 > 3.84

5. Conclusion: Reject H_{01}; Significant

NEED: Information concerning prerequisite courses

1. Degrees of Freedom:

$df = (r-1)(c-1)$
$df = (2-1)(2-1)$

$df = (1)\ (1)$
$df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	162	37	199
	$f_o - f_e$	23.2^2	-23.2^2	
	f_e	138.8	60.2	199
GENERAL STUDENTS	f_o	285	157	442
	$f_o - f_e$	-23.2^2	23.2^2	
	f_e	308.2	133.8	442
TOTALS	f_o	447	194	641
	f_e	447	194	641

4. Chi Square (x^2)

$$X^2 = \frac{538.24}{138.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{538.24}{60.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{538.24}{308.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{538.24}{133.8}\frac{(f_o - f_e)^2}{(f_e)}$$

$X^2 =$ 3.88 + 8.94 + 1.75 + 4.02

$X^2 =$ 18.59 > 3.84

5. Conclusion: Reject H_{01}; Significant

NEED: Information concerning where to get aptitute testing

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	189 99.8^2 89.2	15 -99.8^2 114.8	204 204
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	83 -99.8^2 182.8	335 99.8^2 235.2	418 418
TOTALS	f_o f_e	272 272	350 350	622 622

4. Chi Square (x^2)

$$x^2 = \frac{9960.04}{89.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{9960.04}{114.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{9960.04}{182.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{9960.04}{235.2}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 111.66 + 86.76 + 54.49 + 42.35

$x^2 =$ 295.26 $>$ 3.84

Conclusion: Reject H_{01}; Significant

NEED: Information concerning federal loans to students

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	197 30.7^2 166.3	13 -30.7^2 43.7	210 210
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	321 -30.7^2 351.7	123 30.7^2 92.3	444 444
TOTALS	f_o f_e	518 518.0	136 136.0	654 654.0

4. Chi Square (x^2)

$$x^2 = \frac{942.49}{166.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{942.49}{43.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{942.49}{351.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{942.49}{92.3}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 5.67 + 21.57 + 2.68 + 10.21

$x^2 =$ 40.13 $>$ 3.84

5. Conclusion: Reject H_{01}; Significant

NEED: Information concerning Social Security benefits

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)\ (1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	191	21	212
	$f_o - f_e$	50.4^2	-50.4^2	
	f_e	140.6	71.4	212.0
GENERAL STUDENTS	f_o	250	203	453
	$f_o - f_e$	-50.4^2	50.4^2	
	f_e	300.4	152.6	453.0
TOTALS	f_o	441	224	665
	f_e	441.0	224.0	665.0

4. Chi Square (x^2)

$$X^2 = \frac{2540.16}{140.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2540.16}{71.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2540.16}{300.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2540.16}{152.6}\frac{(f_o - f_e)^2}{(f_e)}$$

$X^2 =$ 18.07 + 35.58 + 8.46 + 16.65

$X^2 =$ 78.76 > 3.84

5. Conclusion: Reject H_{01}; Significant

NEED: Specific information concerning various jobs in which you are interested

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$

$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	182	21	203
	$f_o - f_e$	16.8^2	-16.8^2	
	f_e	165.2	37.8	203.0
GENERAL STUDENTS	f_o	320	94	414
	$f_o - f_e$	-16.8^2	16.8^2	
	f_e	336.8	77.2	414.0
TOTALS	f_o	502	115	617
	f_e	502.0	115.0	617.0

4. Chi Square (x^2)

$$x^2 = \frac{282.24}{165.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{282.24}{37.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{282.24}{336.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{282.24}{77.2}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 1.71 + 7.47 + .84 + 3.66

$x^2 =$ 13.68 $>$ 3.84

5. Conclusion: Reject H_{01}; Significant

NEED: Information concerning college scholarships

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$

$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	193 29.2^2 163.8	17 -29.2^2 46.2	210 210.0
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	321 -29.2^2 350.2	128 29.2^2 98.8	449 449.0
TOTALS	f_o f_e	514 514.0	145 145.0	659 659.0

4. Chi Square (x^2)

$$x^2 = \frac{852.64}{163.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{852.64}{46.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{852.64}{350.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{852.64}{98.8}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 5.21 + 18.46 + 2.43 + 8.63

$x^2 =$ 34.73 $>$ 3.84

5. Conclusion: Reject H_{o1}; Significant

NEED: Information concerning Medi-Cal benefits

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	189	23	212
	$f_o - f_e$	71.7^2	-71.7^2	
	f_e	117.3	94.7	212.0
GENERAL STUDENTS	f_o	138	241	379
	$f_o - f_e$	-71.7^2	71.7^2	
	f_e	209.7	169.3	379.0
TOTALS	f_o	327	264	591
	f_e	327.0	264.0	591.0

4. Chi Square (x^2)

$$x^2 = \frac{5140.89}{117.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{5140.89}{94.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{5140.89}{209.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{5140.89}{169.3}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 43.83 + 54.29 + 24.52 + 30.37

$x^2 =$ 153.01 $>$ 3.84

Conclusion: Reject H_{01}; Significant

NEED: Information concerning welfare benefits

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)\ (1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	123 17.3^2 105.7	85 -17.3^2 102.3	208 208.0
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	153 -17.3^2 170.3	182 17.3^2 264.7	335 335.0
TOTALS	f_o f_e	276 276.0	267 267.0	543 543.0

4. Chi Square (x^2)

$$X^2 = \frac{299.3}{105.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{299.3}{102.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{299.3}{170.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{299.3}{264.7}\frac{(f_o - f_e)^2}{(f_e)}$$

$X^2 =$ 2.8 + 2.9 + 1.8 + 1.1

$X^2 =$ 8.6 $>$ 3.84

5. Conclusion: Reject H_{01}; Significant

NEED: Information concerning Veterans benefits

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	129 $-.7^2$ 129.7	78 $.7^2$ 77.3	207 207.0
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	250 $.7^2$ 249.3	148 $-.7^2$ 148.7	398 398.0
TOTALS	f_o f_e	379 379.0	226 226.0	605 605.0

4. Chi Square (x^2)

$$x^2 = \frac{.49}{129.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{.49}{77.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{.49}{249.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{.49}{148.7}\frac{(f_o - f_e)^2}{(f_e)}$$

$$x^2 = .004 + .006 + .002 + .003$$

$$x^2 = .015 < 3.84$$

5. Conclusion: Accept H_{o1}

NEED: Information concerning other colleges

1. Degrees of Freedom:

   $df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
   $df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	128 -14.7^2 142.7	80 14.7^2 65.3	208 208.0
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	309 14.7^2 294.3	120 -14.7^2 134.7	429 429.0
TOTALS	f_o f_e	437 437.0	200 200.0	637 637.0

4. Chi Square (x^2)

$$x^2 = \frac{216}{142.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{216}{65.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{216}{294.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{216}{134.7}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 1.51 + 3.31 + .73 + 1.60

$x^2 =$ 7.15 $>$ 3.84

5. Conclusion: Reject H_{o1}: Significant

NEED: Information concerning college majors

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	133 -22.5^2 155.5	72 22.5^2 49.5	205 205.0
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	335 22.5^2 312.5	77 -22.5^2 99.5	412 412.0
TOTALS	f_o f_e	468 468.0	149 149.0	617 617.0

4. Chi Square (x^2)

$$X^2 = \frac{506.25}{155.5}\frac{(f_o - f_e)^2}{(f_e)} + \frac{506.25}{49.5}\frac{(f_o - f_e)^2}{(f_e)} + \frac{506.25}{312.5}\frac{(f_o - f_e)^2}{(f_e)} + \frac{506.25}{99.5}\frac{(f_o - f_e)^2}{(f_e)}$$

$X^2 =$ 3.26 + 10.23 + 1.62 + 5.09

$X^2 =$ 20.20 $>$ 3.84

5. Conclusion: Reject H_{o1}; Significant

NEED: Information concerning work experience courses available at F.C.C.

1. Degrees of Freedom:

   $df = (r-1)(c-1)$ $\quad$ $df = (1)(1)$
   $df = (2-1)(2-1)$ $\quad$ $df = 1$

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	159	41	200
	$f_o - f_e$	18.3^2	-18.3^2	
	f_e	140.7	59.3	200.0
GENERAL STUDENTS	f_o	285	146	431
	$f_o - f_e$	18.3^2	-18.3^2	
	f_e	303.3	127.7	431.0
TOTALS	f_o	444	187	631
	f_e	444.0	187.0	631.0

4. Chi Square (x^2)

$$X^2 = \frac{334.89}{140.7}\frac{(f_o - f_e)^2}{(f_e)} + \frac{.89}{59.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{334.89}{303.3}\frac{(f_o - f_e)^2}{(f_e)} + \frac{334.89}{127.7}\frac{(f_o - f_e)^2}{(f_e)}$$

$X^2 =$ 2.38 + 5.65 + 1.10 + 2.62

$X^2 =$ 11.75 $>$ 3.84

5. Conclusion: Reject H_{01}; Significant

GENERAL STUDENT INFORMATION NEEDS

RANK ORDER ACCORDING TO PERCENTILES

PERCENTILE	NEED EXPRESSED
81%	Information Concerning College Majors
77%	Specific Information Concerning Various Jobs
72%	Information Concerning Federal Loans to Students
72%	Information Concerning Other Colleges
71%	Information Concerning College Scholarships
71%	Information Concerning Graduation Requirements
66%	Information Concerning Elective Courses
66%	Information Concerning Work Experience Courses
64%	Information Concerning Prerequisite Courses
63%	Information Concerning Veterans Benefits
55%	Information Concerning Social Security Benefits
46%	Information Concerning Welfare Benefits
36%	Information Concerning Medi-Cal Benefits
20%	Information Concerning Where to Get Aptitude Testing

HANDICAPPED STUDENT INFORMATION NEEDS

RANK ORDER ACCORDING TO PERCENTILES

PERCENTILE	NEED EXPRESSED
94%	Information Concerning Federal Student Loans
93%	Information Concerning Where To Get Aptitude Testing
92%	Information Concerning College Scholarships
90%	Information Concerning Social Security Benefits
90%	Information Concerning Specific Jobs
89%	Information Concerning Medi-Cal Benefits
81%	Information Concerning Prerequisite Courses
80%	Information Concerning Work Experience Courses
79%	Information Concerning Elective Courses
65%	Information Concerning College Majors
62%	Information Concerning Other Colleges
62%	Information Concerning Veterans Benefits
59%	Information Concerning Welfare Benefits
52%	Information Concerning Graduation Requirements

STATISTICAL TREATMENT

PERSONAL NEEDS

HYPOTHESIS: H_{02}

There is no difference in the expressed personal needs of persons without physical disabilities and those with physical disabilities of post-secondary school age, as expressed at the .05 level of significance.

NEED: Economic resources

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)\ (1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	168 44.5^2 123.5	33 -44.5^2 77.5	201 201
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	230 -44.5^2 274.5	217 44.5^2 172.5	447 447
TOTALS	f_o f_e	398 398	250 250	648 648

4. Chi Square (x^2)

$$x^2 = \frac{1980}{123.5}\frac{(f_o - f_e)^2}{(f_e)} + \frac{1980}{77.5}\frac{(f_o - f_e)^2}{(f_e)} + \frac{1980}{274.5}\frac{(f_o - f_e)^2}{(f_e)} + \frac{1980}{172.5}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 16.03 + 25.55 + 7.21 + 11.48

$x^2 =$ 60.27 $>$ 3.84

5. Conclusion: Reject H_{02}; Significant

NEED: Alcoholism

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	43 -6^2 49	158 6^2 152	201 201
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	118 6^2 112	342 -6^2 348	460 460
TOTALS	f_o f_e	161 161	500 500	661 661

4. Chi Square (x^2)

$$x^2 = \frac{36}{49}\frac{(f_o - f_e)^2}{(f_e)} + \frac{36}{152}\frac{(f_o - f_e)^2}{(f_e)} + \frac{36}{112}\frac{(f_o - f_e)^2}{(f_e)} + \frac{36}{348}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ .73 + .24 + .32 + .10

$x^2 =$ 1.39 $<$ 3.84

Conclusion: Accept H_{02}; Not Significant

NEED: Drug abuse

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)\ (1)$

$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	28	178	206
	$f_o - f_e$	-13.1^2	13.1^2	
	f_e	41.1	164.9	206.0
GENERAL STUDENTS	f_o	106	360	466
	$f_o - f_e$	13.1^2	-13.1^2	
	f_e	92.9	373.1	466.0
TOTALS	f_o	134	538	672
	f_e	134.0	538.0	672.0

4. Chi Square (x^2)

$$x^2 = \frac{171.61}{41.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{171.61}{164.9}\frac{(f_o - f_e)^2}{(f_e)} + \frac{171.61}{92.9}\frac{(f_o - f_e)^2}{(f_e)} + \frac{171.61}{373.1}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 4.18 + 1.04 + 1.85 + .04

$x^2 =$ 7.11 $>$ 3.84

5. Conclusion: Reject H_{02}; Significant

NEED: Feelings of anxiety and tension

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	110	99	209
	$f_o - f_e$	1.6^2	-1.6^2	
	f_e	111.6	97.4	209.0
GENERAL STUDENTS	f_o	244	210	454
	$f_o - f_e$	1.6^2	-1.6^2	
	f_e	242.4	211.6	454.0
TOTALS	f_o	354	309	663
	f_e	354.0	309.0	663.0

4. Chi Square (x^2)

$$x^2 = \frac{2.56}{111.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2.56}{97.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2.56}{242.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2.56}{211.6}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ .02 + .03 + .01 + .00

$x^2 =$ .06 $<$ 3.84

Conclusion: Accept H_{02}

NEED: Religious value conflicts

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$

$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	31 -14^2 45	174 14^2 160	205 205
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	113 14^2 99	338 -14^2 352	451 451
TOTALS	f_o f_e	144 144	512 512	656 656

4. Chi Square (x^2)

$$x^2 = \frac{196}{45}\frac{(f_o - f_e)^2}{(f_e)} + \frac{196}{160}\frac{(f_o - f_e)^2}{(f_e)} + \frac{196}{99}\frac{(f_o - f_e)^2}{(f_e)} + \frac{196}{352}\frac{(f_o - f_e)^2}{(f_e)}$$

$$x^2 = 4.36 + 1.23 + 1.98 + .56$$

$$x^2 = 8.13 > 3.84$$

5. Conclusion: Reject H_{02}; Significant

NEED: Husband-wife relationship

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	53	155	208
	$f_o - f_e$	-11.2^2	11.2^2	
	f_e	64.2	143.8	208.0
GENERAL STUDENTS	f_o	153	306	459
	$f_o - f_e$	11.2^2	-11.2^2	
	f_e	141.8	317.2	459.0
TOTALS	f_o	206	461	667
	f_e	206.0	461.0	667.0

4. Chi Square (x^2)

$$X^2 = \frac{125.44}{64.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{125.44}{143.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{125.44}{141.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{125.44}{317.2}\frac{(f_o - f_e)^2}{(f_e)}$$

$X^2 =$ 1.95 + .87 + .88 + .40

$X^2 =$ 4.10 > 3.84

Conclusion: Reject H_{02}; Significant

NEED: Withdrawal tendencies

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	119 2.4^2 116.6	98 -2.4^2 100.4	217 217
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	334 -2.4^2 336.4	292 2.4^2 289.6	626 626
TOTALS	f_o f_e	453 453	390 390	843 843

4. Chi Square (x^2)

$$x^2 = \frac{5.76}{116.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{5.76}{100.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{5.76}{336.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{5.76}{289.6}\frac{(f_o - f_e)^2}{(f_e)}$$

$$x^2 = .05 + .06 + .02 + .02$$

$$x^2 = .15 < 3.84$$

5. Conclusion: Accept H_{o2}

NEED: Temper control or self control problem

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	53	161	214
	$f_o - f_e$	-24.9^2	24.9^2	
	f_e	77.9	136.1	214.0
GENERAL STUDENTS	f_o	198	278	476
	$f_o - f_e$	24.9^2	-24.9^2	
	f_e	173.1	302.9	476.0
TOTALS	f_o	251	439	690
	$-f_e$	251.0	439.0	690.0

4. Chi Square (x^2)

$$x^2 = \frac{620.01}{77.9}\frac{(f_o - f_e)^2}{(f_e)} + \frac{620.01}{136.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{620.01}{173.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{620.01}{302.9}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 7.96 + 4.56 + 3.58 + 2.05

$x^2 =$ 18.15 $>$ 3.84

5. Conclusion: Reject H_{o2}; Significant

NEED: Sexual adjustment

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\quad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\quad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	111 25.9^2 85.1	91 -25.9^2 116.9	202 202.0
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	167 -25.9^2 182.9	291 25.9^2 275.1	458 458.0
TOTALS	f_o f_e	278 278.0	382 382.0	660 660.0

4. Chi Square (x^2)

$$x^2 = \frac{670.81}{85.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{670.81}{116.9}\frac{(f_o - f_e)^2}{(f_e)} + \frac{670.81}{182.9}\frac{(f_o - f_e)^2}{(f_e)} + \frac{670.81}{275.1}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 7.88 + 5.74 + 3.67 + 2.44

$x^2 =$ 19.73 $>$ 3.84

Conclusion: Reject H_{c2}; Significant

NEED: Problem with reading skills needed for college work

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	173 60^2 113	31 -60^2 91	204 204
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	181 -60^2 241	254 60^2 194	435 435
TOTALS	f_o f_e	354 354	285 285	639 639

4. Chi Square (x^2)

$$x^2 = \frac{3600}{113}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3600}{91}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3600}{241}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3600}{194}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 31.86 + 39.56 + 14.94 + 18.56

$x^2 =$ 119.86 > 3.84

Conclusion: Reject H_{02}; Significant

NEED: Problem with writing skills needed to do class work

1. Degrees of Freedom:

   $df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
   $df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	171	34	205
	$f_o - f_e$	61.6^2	-61.6^2	
	f_e	109.4	95.6	205
GENERAL STUDENTS	f_o	163	258	421
	$f_o - f_e$	-61.6^2	61.6^2	
	f_e	224.6	196.4	421
TOTALS	f_o	334	292	626
	f_e	334	292	626

4. Chi Square (x^2)

$$x^2 = \frac{3794.6}{109.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3794.6}{95.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3794.6}{224.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3794.6}{196.4}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 34.69 + 39.69 + 16.89 + 19.32

$x^2 =$ 110.59 $>$ 3.84

5. Conclusion: Reject H_{02}; Significant

NEED: Problem with taking tests to pass courses

1. Degrees of Freedom:

   $df = (r-1)(c-1)$ $\qquad$ $df = (1)\ (1)$
   $df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	181 62.4^2 118.6	29 -62.4^2 91.4	210 210
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	151 -62.4^2 213.4	227 62.4^2 164.6	378 378
TOTALS	f_o f_e	332 332	256 256	588 588

4. Chi Square (x^2)

$$x^2 = \frac{3893.76}{118.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3893.76}{91.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3893.76}{213.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3893.76}{164.6}\frac{(f_o - f_e)^2}{(f_e)}$$

$$x^2 = 32.83 + 42.60 + 28.25 + 23.66$$

$$x^2 = 117.34 > 3.84$$

Conclusion: Reject Ho2; Significant

NEED: Problem with low (D and F) school grades

1. Degrees of Freedom:

   df = (r-1)(c-1) df = (1) (1)
   df = (2-1)(2-1) df = 1

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	163 62^2 101	35 -62^2 97	198 198
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	158 -62^2 220	273 62^2 211	431 431
TOTALS	f_o f_e	321 321	308 308	629 629

4. Chi Square (x^2)

$$x^2 = \frac{3844}{101}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3844}{97}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3844}{220}\frac{(f_o - f_e)^2}{(f_e)} + \frac{3844}{211}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 38.06 + 39.63 + 17.47 + 18.22

$x^2 =$ 113.38 > 3.84

Conclusion: Reject H_{02}; Significant

NEED: Problem with study skills

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$

$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	167 51.1^2 115.9	29 -51.1^2 80.1	196 196
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	189 -51.2^2 240.1	217 51.1^2 165.9	406 406
TOTALS	f_o f_e	356 356	246 246	602 602

4. Chi Square (χ^2)

$$\chi^2 = \frac{2611.2}{115.9}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2611.2}{80.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2611.2}{240.1}\frac{(f_o - f_e)^2}{(f_e)} + \frac{2611.2}{165.9}\frac{(f_o - f_e)^2}{(f_e)}$$

$\chi^2 =$ 22.53 + 32.60 + 10.88 + 15.74

$\chi^2 =$ 81.75 $>$ 3.84

5. Conclusion: Reject H_{02}; Significant

NEED: Suicidal feelings

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	27 -10^2 37	153 10^2 143	180 180
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	91 10^2 81	301 -10^2 311	392 392
TOTALS	f_o f_e	118 118	454 454	572 572

4. Chi Square (x^2)

$$x^2 = \frac{100}{37}\frac{(f_o - f_e)^2}{(f_e)} + \frac{100}{143}\frac{(f_o - f_e)^2}{(f_e)} + \frac{100}{81}\frac{(f_o - f_e)^2}{(f_e)} + \frac{100}{311}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 2.70 + .70 + 1.23 + .32

$x^2 =$ 4.95 > 3.84

Conclusion: Reject H_{02}; Significant

NEED: Problems with V.D.

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	11	173	184
	$f_o - f_e$	-14.2^2	14.2^2	
	f_e	25.2	158.8	184
GENERAL STUDENTS	f_o	70	338	408
	$f_o - f_e$	14.2^2	-14.2^2	
	f_e	55.8	352.2	408
TOTALS	f_o	81	511	592
	f_e	81	511	592

4. Chi Square (x^2)

$$x^2 = \frac{201.6}{25.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{201.6}{158.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{201.6}{55.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{201.6}{352.2}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 8.00 + 1.27 + 3.61 + .57

$x^2 =$ 13.45 $>$ 3.84

Conclusion: Reject H_{02}; Significant

NEED: Smoking problem

1. Degrees of Freedom:

   $df = (r-1)(c-1)$ $\qquad$ $df = (1)(1)$
   $df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

   Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o $f_o - f_e$ f_e	59 -13.2^2 72.2	133 13.2^2 119.8	192 192
GENERAL STUDENTS	f_o $f_o - f_e$ f_e	193 13.2^2 179.8	285 -13.2^2 298.2	478 478
TOTALS	f_o f_e	252 252	418 418	670 670

4. Chi Square (x^2)

$$x^2 = \frac{174.2}{72.2}\frac{(f_o - f_e)^2}{(f_e)} + \frac{174.2}{119.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{174.2}{179.8}\frac{(f_o - f_e)^2}{(f_e)} + \frac{174.2}{298.2}\frac{(f_o - f_e)^2}{(f_e)}$$

$$x^2 = 2.41 + 1.45 + .97 + .58$$

$$x^2 = 5.41 > 3.84$$

5. Conclusion: Reject H_{o2}; Significant

NEED: Establishing personal goals

1. Degrees of Freedom:

$df = (r-1)(c-1)$ $\qquad$ $df = (1)\ (1)$
$df = (2-1)(2-1)$ $\qquad$ $df = 1$

2. Level of Significance .05

Significance Level at .05 with 1 degree of freedom = 3.84

3. Observed Frequency (f_o) and Expected Frequency (f_e) Chart

Classification	Frequency	Yes	No	TOTAL
HANDICAPPED STUDENTS	f_o	135	61	196
	$f_o - f_e$	16.6^2	-16.6^2	
	f_e	118.4	77.6	196
GENERAL STUDENTS	f_o	260	198	458
	$f_o - f_e$	-16.6^2	16.6^2	
	f_e	276.6	181.4	458
TOTALS	f_o	395	259	654
	f_e	395	259	654

4. Chi Square (x^2)

$$x^2 = \frac{275.6}{118.4}\frac{(f_o - f_e)^2}{(f_e)} + \frac{275.6}{77.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{275.6}{276.6}\frac{(f_o - f_e)^2}{(f_e)} + \frac{275.6}{181.4}\frac{(f_o - f_e)^2}{(f_e)}$$

$x^2 =$ 2.33 + 3.55 + 1.00 + 1.52

$x^2 =$ 8.40 > 3.84

5. Conclusion: Reject H_o; Significant

GENERAL STUDENT PERSONAL NEEDS

RANK ORDER ACCORDING TO PERCENTILES

PERCENTILE	NEED EXPRESSED
57%	Problems of Establishing Personal Goals
54%	Problems of Feelings of Anxiety and Tension
53%	Problems of Withdrawal Tendencies
51%	Problems of Economic Resources
47%	Problems With Study Skills
42%	Problems of Temper or Self-Control Problems
42%	Problems With Reading Skills For College Work
40%	Problems With Taking Tests To Pass Courses
40%	Smoking Problem
39%	Problems With Writing Skills Required For Class Work
37%	Problems With Low School Grades
36%	Problems With Sexual Adjustment
33%	Problems With Husband-Wife Relationships
30%	Problems With Suicidal Feelings
26%	Problems With Alcoholism
25%	Problems With Religious Value Conflicts
23%	Problems With Drug Abuse
17%	Problems With V.D.

HANDICAPPED STUDENT PERSONAL NEEDS

RANK ORDER ACCORDING TO PERCENTILES

PERCENTILE	NEED EXPRESSED
86%	Problems With Taking Tests To Pass Courses
85%	Problems With Reading Skills Required For Classes
85%	Problems With Study Skills
84%	Problems Relating To Economic Resources
83%	Problems With Writing Skills Needed For Class Work
82%	Problems With Low School Grades
69%	Problems Establishing Personal Goals
55%	Problems Of Withdrawal Tendencies
55%	Problems Of Sexual Adjustment
53%	Problems With Feelings of Anxiety And Tension
31%	Problems With Smoking
25%	Problems With Husband And Wife Relationships
25%	Problems With Temper And Self-Control
21%	Problems With Alcoholism
15%	Problems With Religious Value Conflicts
15%	Problems With Suicidal Feelings
14%	Problems With Drug Abuse
6%	Problems With V.D.

X. SIGNIFICANCE OF THE DATA

The following charts provide the reader with a Chi Square, a General Student Percentile and a Handicapped Student Percentile.

This study is concerned with analysis of variance; as a result, the reader should view the Chi Square assigned to each student need as significant at the .05 level if the Chi Square number is greater than 3.84.

A percentile is presented for both General Students and Handicapped Students in order to aid the reader in identifying which group expressed the greater need.

SUMMARY OF THE DATA

At the on-set, this study was concerned with the Information Needs and Personal Counseling Needs of Handicapped Students and Regular Students attending Fresno City College. It was hypothesized that there would be no significant difference (.05 level) between selected needs of Handicapped Students compared with Regular Students.

As demonstrated by the graphic presentation of the data in Section IX, the hypothesis was generally rejected.

In the Informational Needs, the handicapped student indicated significally (105) higher needs in the following areas:

1. Information Concerning Federal Student Loans
2. Information Concerning Where to Get Aptitude Testing
3. Information Concerning College Scholarships

4. Information Concerning Social Security Benefits
5. Information Concerning Various Jobs
6. Information Concerning Medi-Cal Benefits
7. Information Concerning Prerequisite Courses
8. Information Concerning Work Experience Courses
9. Information Concerning Elective Courses
10. Information Concerning Welfare Benefits

While the General Students indicated significantly (.05) high information needs in the following areas:

1. Information Concerning College Majors
2. Information Concerning Other Colleges
3. Information Concerning Graduation Requirements

There were no differences in the following information needs of Handicapped and General Students.

1. Information Concerning Veterans Benefits

In the Personal Needs, the Handicapped Student indicated significantly (.05) higher needs in the following areas:

1. Problems With Taking Tests To Pass Courses
2. Problems With Reading Skills Required For College
3. Problems With Study Skills
4. Problems Relating To Economic Resources
5. Problems With Writing Skills Needed For Class Work
6. Problems With Low School Grades
7. Problems Establishing Personal Goals
8. Problems Of Sexual Adjustment

While the General Students indicated significantly (.05) higher personal needs in the following areas:

1. Problems With Smoking
2. Problems With Husband-Wife Relationships
3. Problems With Temper and Self-Control
4. Problems With Religious Value Conflicts
5. Problems With Suicidal Feelings
6. Problems With Drug Abuse
7. Problems With V.D.

There were no differences in the following personal needs of Handicapped and General Students:

1. Problems With Withdrawal Tendencies
2. Problems With Feelings of Anxiety and Tension
3. Problems With Alcoholism

INFORMATION NEEDS

Chi Square	Handicapped Students (%)	General Students (%)	Need Expressed
40.13	94%	72%	Information Concerning Federal Student Loans
295.26	93%	20%	Information Concerning Where To Get Aptitude Testing
34.73	92%	71%	Information Concerning College Scholarships
78.76	90%	55%	Information Concerning Social Security Benefits
13.68	90%	77%	Information Concerning Various Jobs
153.01	89%	36%	Information Concerning Medi-Cal Benefits
18.59	81%	64%	Information Concerning Pre-requisite Courses
11.75	80%	66%	Information Concerning Work Experience Courses
12.30	79%	66%	Information Concerning Elective Courses
20.20	65%	81%	Information Concerning College Majors
7.15	62%	72%	Information Concerning Other Colleges
.015	62%	63%	Information Concerning Veterans Benefits
8.6	59%	46%	Information Concerning Welfare Benefits
21.86	52%	71%	Information Concerning Graduation Requirements

PERSONAL NEEDS

Chi Square	Handicapped Students (%)	General Students (%)	Need Expressed
117.34	86%	40%	Problems With Taking Tests To Pass Courses
119.86	85%	42%	Problems With Reading Skills Required For College
81.75	85%	47%	Problems With Study Skills
60.27	84%	51%	Problems Relating To Economic Resources
110.59	83%	39%	Problems With Writing Skills Needed For Class Work
113.38	82%	37%	Problems With Low School Grades
8.40	69%	57%	Problems Establishing Personal Goals
.15	55%	53%	Problems Of Withdrawal Tendencies
19.73	55%	36%	Problems Of Sexual Adjustment
.06	53%	54%	Problems With Feelings of Anxiety And Tension
5.41	31%	40%	Problems With Smoking
4.10	25%	33%	Problems With Husband-Wife Relationships
18.15	25%	42%	Problems With Temper and Self-Control
1.39	21%	26%	Problems With Alcoholism
8.13	15%	25%	Problems With Religious Value Conflicts
4.95	15%	30%	Problems With Suicidal Feelings
7.11	14%	23%	Problems With Drug Abuse
13.45	6%	17%	Problems With V.D.

XI. RECOMMENDATIONS

A. PRACTICUM TEAM

Based on the results received from the study, the practicum team recommends:

1. That the present Handicapped Student Program establish division level product objectives that are to be accomplished during the 1974-75 school year.
2. That the Handicapped Student Program continue to use the Informational and Personal Counseling Needs assessment to identify Student Needs.
3. That activities and time lines be designed to meet each stated objective.
4. That the Handicapped Student Program be arranged into components according to specific product objectives identifying activities, personnel, materials and costs.
5. That an affective as well as behavioral evaluation for the program be designed and implemented in order to give direction to the program.
6. That an attempt be made to develop a cost analysis of services performed in terms of needs being served. Comparing information need services costs to personal counseling needs services.

The practicum team also recommends further study in the following areas:

1. An analysis of the potential student population as evidenced by data concerning handicapped individuals within the Fresno area.

2. An analysis of present programs available for handicapped individuals in order to identify services received from each program.
3. An analysis of the local Fresno Unified School District Program for the Handicapped (Sunshine School) in order to develop an articulated K-14 program.
4. An analysis of the relationship of State programs and local handicapped organizations in order to strengthen the involvement of State and local personnel in the Fresno City College Handicapped Student Program.

B. PRACTICUM TEAM INVOLVEMENT

Daniel C. Grady Daniel C. Grady

Guidance Consultant/Psychologist, Fresno City Schools
Assistant Professor, Guidance and Counseling,
California State University, Fresno
Psychology Instructor, Fresno City College

Gary L. Graham G. L. Graham

Director, Services for the Handicapped, Fresno City College
Psychologist
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Richard R. Gibbs Richard R. Gibbs

Instructor in Social & Behavioral Sciences
Counselor
Fresno City College

Larry W. Martin Larry W. Martin

Dean of the Evening Division, Fresno City College

Because of our daily professional involvement dealing with tasks and problems that constantly presented themselves during the developmental, implementation, and analysis stages of the College Governance Practicum, we are presenting a combined evaluation report.

The following tasks were completed by each practicum member:

1. The development of the proposed practicum problem.

   A. Review of the applied research literature distributed by Dr. Fred Dagneais.

   B. Review of the various Guidance and Counseling Problems reported in master theses and abstracts at California State University, Fresno.

   C. Identifying a problem that would aid Fresno City College's Handicapped Student Program as well as our interests.

   D. The written proposal in rough draft form and the final written proposal mailed to Nova University.

2. The design of two survey instruments.

   A. The rough drafts of the survey instruments were reviewed with consultants in the educational process concerning questionnaire design and data presentation. Professional persons included were:

      1. Gordon Graves, Ed.D., Director of Research, Fresno City Schools

      2. Fred Dagneais, Ph.D., National Lecturer, Nova University

      3. David Allen, Ph.D., Research Technician, Fresno City Schools

   B. A review of the relevant literature for the purpose of selecting Information Needs and Personal Counseling Needs and entifying the significance of the problems.

C. A field test was made of the preliminary draft of the survey questionnaire. This involved administering the questionnaire to 20 regular students and 10 handicapped students and a follow-up item analysis through personal interviews with each field test participant.

Results and impressions derived from this limited testing and follow-up analysis, resulted in a refinement of the items on the survey questionnaire and a repositioning of item groupings for more valid presentation. This refinement resulted in less item ambiguity, item overlap and increased questionnaire validity.

3. Data Gathering - Collection of Data Procedure

The source of the data was refined through four distinct phases once the study was delineated to the problem topic.

A. Regular Students and Handicapped Students at Fresno City College were to be surveyed.

B. Selection refinement and final grouping of the items to be included on the survey questionnaire.

C. Establishment of a final grouping of returned survey questionnaires to facilitate the data analysis through the use of Chi Square.

4. Group Meetings

In order to accomplish all the aforementioned tasks, the following activities were utilized.

A. Regular team meetings (twice a week).

B. Regular individual consultations between members.

5. Practicum Writing

Each team member was assigned to coordinate a specific task.

A. One member was assigned responsibility to write up selected sections.

B. Copies of the sections were given to each member for input.

C. Final completion of each section was a result of the team effort.

Section 1. Statement of the Problem: Graham

Section 2. Hypothesis: Grady

Section 3. Background and Significance: Graham

Section 4. Definition of Terms: Gibbs

Section 5. Limitations of the Study: Martin

Section 6. Basic Assumptions: Martin

Section 7. Procedures for Collecting Data

Agency Interviews: Graham and Grady

Instrument Design and Student Interviews: Gibbs, Grady, Graham, Martin

Section 8. Procedures for Treating the Data:

Chi Square Chart Design: Grady

Data Treatment: Gibbs, Grady, Graham, Martin

Section 9. Pure Data: Gibbs, Grady, Graham, Martin

Section 10. Significance: Grady and Gibbs

Section 11. Recommendations: Gibbs, Grady, Graham, Martin

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APPENDIX

Survey I

For the comparison of Handicapped Students with General Students a modified differential needs instrument was utilized. Development and procedures used in the Societal Factors Practicum Needs assessment should be reviewed for samples of Information Needs and Personal Counseling Needs (Nova University, November, 1973) as these were utilized in the study.

Survey II

B

THE CALIFORNIA COMMUNITY COLLEGES
A 1974 SURVEY REGARDING:
NEEDS OF PERSONS WITH HANDICAPS

We are aware that persons with handicaps often require special programs and services if they are to have the opportunity for an education. This is where you can help us. Whether or not you are currently a student at a community college, you can help us become more aware of the needs that exist for persons with handicaps, so that we can plan to meet those needs. There can be no assurance that any new programs or services will result from this survey. Our intent is to identify the needs that are presently not being met. However, the information you provide will be vital in assisting the colleges to develop occupational programs and guidance procedures for persons with handicaps.

INSTRUCTIONS

Your participation in this survey is voluntary and confidential. Answer each question as honestly and frankly as you can. You will find that most questions can be answered with a check (√) mark. It will not take much of your time, but the information you provide will be greatly appreciated. You are not required to give your name. This is optional and up to you.

PLEASE DO NOT COMPLETE A QUESTIONNAIRE IF YOU HAVE PREVIOUSLY DONE SO.

SECTION A BIOGRAPHICAL

1. SEX: (√) MALE____ FEMALE____ 2. AGE: (√) 20 OR UNDER____ 21 OR OVER____

3. ZIP CODE_____ 4. VETERAN: (√) YES____ NO____ 5. NOW A STUDENT (√) YES____ NO____

6. NAME OF SCHOOL YOU PRESENTLY ATTEND (if applicable)_____
(print name)

7. PLEASE CHECK (√) SO WE WILL KNOW IF YOU ARE A MEMBER OF A GROUP IDENTIFIED AS AN ETHNIC MINORITY YES_____ NO_____

8. HIGHEST GRADE LEVEL COMPLETED IN ANY SCHOOL (Circle highest that applies)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 16+

9. IS ENGLISH THE BASIC LANGUAGE YOU USE TO COMMUNICATE? PLEASE CHECK (√) yes____ no____

SECTION B DISABILITY DETERMINATION

1. You can help us in planning by telling us which of the following definitions of disability best describe your situation. Please check (√) all that applies.

   a. ORTHOPEDICALLY HANDICAPPED. Individuals with a limited ability in self-mobility, sitting and/or using materials or equipment due to muscular, skeletal or neuro-muscular impairment.

   b. PARTIALLY SIGHTED. Vision which, after correction, is such that printed materials can be used with magnification or under special conditions.

   c. LEGALLY BLIND. Visual loss so severe that, for educational purposes, vision cannot be used as a means of learning.

   d. DEAF. Unable to hear or recognize speech sounds, even with the use of a hearing aid.

   e. SEVERELY HARD OF HEARING. Difficulty in hearing and understanding speech. Hearing must be supplemented by a hearing aid and/or lip reading.

   f. SPEECH IMPAIRED. Speech differs from that of others to the extent that it is noticeable, such as articulatory, vocal, stuttering, delayed or speech disorder.

   g. OTHER HEALTH IMPAIRED. Limited strength, vitality and alertness due to chronic health problem.

   h. DEVELOPMENTALLY DISABLED. Includes only individuals who can be trained to enter the world of work, often 'Labeled' as slow-learner or mentally exceptional.

   i. LEARNING DISABILITY. Exhibited by a difficulty in using one or more basic processes involved in understanding, or in using spoken or written language. Does not include visual, hearing or motor handicaps, environmental disadvantages or other concerns.

   j. EMOTIONALLY DISTURBED. Individuals with difficulties limiting their ability to consistently govern their own behavior.

SECTION C OBJECTIVES

1. Would you consider going to college? (check (√) the one which applies.) yes___ no___ presently attending___

2. Identify by a check (√) any of the following classes which you feel would benefit you as a college student.

Career planning	a.___	Personal adjustment	e.___	Sex education	i.___
Consumer education	b.___	Remedial subjects	f.___	Driver training	j.___
Personal Hygiene	c.___	Adaptive homemaking	g.___	Leisure time development	k.___
Adaptive physical education	d.___	Work experience	h.___	None	l.___

Other (print) _____

3. If you have attended college and dropped out, check (√) the reason(s) why?

Health	a.___	Lack of special equipment	f.___	Lack of special services	k.___
Grades	b.___	Accepted employment	g.___	Architectual barriers	l.___
Married	c.___	Lack of special classes	h.___	Attitude of faculty	m.___
Financial	d.___	Lost Interest	i.___	Transportation	n.___
Moved	e.___	Family Responsibilities	j.___	Personal reasons	o.___

Other (print reason) _____

4. If you have not attended college, check (√) the reason why?

Conflict with employment	a.___	Family Responsibilities	f.___	Grades	j.___
Lack of special equipment	b.___	Health	g.___	Faculty attitude	k.___
Lack of special services	c.___	Financial	h.___	Still in high school	l.___
Lack of special classes	d.___	Transportation	i.___	No interest	m.___
Architectual barriers	e.___	Other (print reason)			

SECTION D SERVICES

1. CHECK (√) THE AGENCIES FROM WHOM YOU PRESENTLY RECEIVE ASSISTANCE. (check all that apply)

Department of Rehabilitation	a.___	Department of Public Welfare	d.___
Department of Human Resources Development	b.___	Social Security Administration	e.___
Veterans Administration	c.___	Recreation Department	f.___

Other Agency (print name)_____

2. CHECK (√) ANY OF THE FOLLOWING YOU COULD USE AS A COLLEGE STUDENT.

Counseling, personal	a.___	Special parking	i.___	Job Placement	q.___
Counseling, career	b.___	Talking books	j.___	Notetaker	r.___
Counseling, academic	c.___	Interpreter (for the deaf)	k.___	Tutor	s.___
Campus orientation	d.___	Typewriter (special equipped)	l.___	Housing	t.___
Braillest	e.___	Transportation (off campus)	m.___	Child care	u.___
Registration priority	f.___	Battery Charger	n.___	Attendant	v.___
Print magnifier	g.___	Large print books	o.___	Braille books	w.___
Tape recorder	h.___	Financial aid	p.___	Reader (a person)	x.___

Other (print)_____

3. CHECK (√) ANY OF THE FOLLOWING THAT YOU NOW USE.

Wheelchair, manual	a.___	Hand splints	e.___	Crutches	h.___	Respirator	k.___
Wheelchair, electric	b.___	Leg braces	f.___	Walker	i.___	Guide Dog	l.___
Hand controls (car)	c.___	Back brace	g.___	Cane	j.___	Brailler	m.___
Hearing aid	d.___						

Other (print name)_____

SECTION E INCOME

1. Sources of income (please check (√) all that apply).

Family	a.___	Self	d.___	Compensatory educatic-	g.___
Trust	b.___	Public welfare	e.___	Social security	h.___
Relative	c.___	College financial aid	f.___	Military disability	i.___

Other (name source)_____

2. Is your total income from both family and self less than $15,000 per year? yes___ no___

SECTION F PERSONAL CONTACT

1. Would you like to be contacted by a college representative? yes___ no___

2. Name (optional, not required)_____

Address (optional, not required)_____

SECTION G COMMENTS

Add any comments you care to make:_____

_____

_____

_____

_____